

## ABSTRACT

A projection-type display apparatus for projecting an image onto a screen includes a light source, a signal processing unit for processing an input image signal to output a first image signal representing first primary-color information  $R_1$ ,  $G_1$ , and  $B_1$  representing values of red, green, and blue components of an image to be projected, a signal conversion unit for converting the first image signal into a second image signal representing a coefficient  $M$  which depends on luminance of the image to be projected defined by the first primary-color information  $R_1$ ,  $G_1$ , and  $B_1$ , and into a third image signal representing second primary-color information  $R_2 = R_1/M$ ,  $G_2 = G_1/M$ , and  $B_2 = B_1/M$ . The projection-type display apparatus also includes a first light valve for modulating light received from the light source in accordance with the coefficient  $M$ , the light changing in color among red, green, and blue, a second light valve for further modulating the light received from the first light valve in accordance with the second primary-color information  $R_2$ ,  $G_2$ , and  $B_2$  in sequence, and a projection unit for throwing the light received from the second light valve onto the screen.